

Contents Volume 54, 1991

VOL. 54, NO. 1

30 MARCH 1991

Research Papers

- Sublimation of snow intercepted by an artificial conifer
R.A. Schmidt (Fort Collins, CO, U.S.A.) 1
- Thermal radiation components of the energy balance at the ground
A. Heitor, R. Rosa (Évora, Portugal) and A.J. Biga (Lisbon, Portugal) 29
- Comparison of two methods for estimating the evaporation of a *Pinus pinaster* (Ait.) stand: sap flow and energy balance with sensible heat flux measurements by an eddy covariance method
A. Diawara, P. Berbigier (Villenave d'Ornon, France) and D. Loustau (Cestas, France) 49
- Momentum absorption by dried-pea crops.
I. Field measurements over and within varieties of differing leaf structure
M.R. Holland, J. Grace (Edinburgh, U.K.) and C.L. Hedley (Norwich, U.K.) 67
- Momentum absorption by dried-pea crops
II. Wind tunnel measurements of drag on isolated leaves and pods
M.R. Holland, J. Grace (Edinburgh, U.K.) and C.L. Hedley (Norwich, U.K.) 81

Short Communication

- Net photosynthesis of sour orange trees maintained in atmospheres of ambient and elevated CO₂ concentration
S.B. Idso, B.A. Kimball and S.G. Allen (Phoenix, AZ, U.S.A.) 95

VOL. 54, NOS. 2-4

APRIL 1991

Special Issue: Modeling Stomatal Resistance

- Modeling stomatal resistance: an overview of the 1989 workshop at the Pennsylvania State University
T.N. Carlson (University Park, PA, USA) 103

Research Papers

- Physiological and environmental regulation of stomatal conductance, photosynthesis and transpiration: a model that includes a laminar boundary layer
G.J. Collatz, C. Grivet (Stanford, CA, USA), J.T. Ball and J.A. Berry (Reno, NV, USA) 107
- Measurement and influence of environmental and plant factors on stomatal conductance

| | |
|--|-----|
| in the field | |
| N.C. Turner (Wembley, WA, Australia) | 137 |
| Stomatal response to certain environmental factors: a comparison of models for subalpine trees in the Rocky Mountains | |
| W.J. Massman and M.R. Kaufmann (Fort Collins, CO, USA) | 155 |
| Extrapolating plant water flow resistances and capacitances to regional scales | |
| E.R. Hunt, Jr., S.W. Running (Missoula, MT, USA) and C.A. Federer (Durham, NH, USA) | 169 |
| Discerning the forest from the trees: an essay on scaling canopy stomatal conductance | |
| D.D. Baldocchi, R.J. Luxmore (Oak Ridge, TN, USA) and J.L. Hatfield (Ames, IA, USA) | 197 |
| The concept of canopy resistance: historical survey and comparison of different approaches | |
| J.-P. Lhomme (Turrialba, Costa Rica) | 227 |
| Estimation of maize (<i>Zea mays</i> L.) canopy conductance by scaling up leaf stomatal conductance | |
| P. Rochette, R.L. Desjardins, L.M. Dwyer, D.W. Stewart (Ottawa, Ont., Canada), E. Pattey and P.A. Dubé (Quebec City, Que., Canada) | 241 |
| Some plant factors controlling evapotranspiration | |
| B. Saugier (Orsay, France) and N. Katerji (Thiverval-Grignon, France) | 263 |
| Effects of spatial scale on stomatal control of transpiration | |
| K.G. McNaughton (Palmerston North, New Zealand) and P.G. Jarvis (Edinburgh, UK) | 279 |
| Stomatal and surface conductance of tropical rainforest | |
| A.J. Dolman, J.H.C. Gash, J. Roberts and W.J. Shuttleworth (Wallingford, UK) | 303 |
| Canopy resistance formulation and its effect in mesoscale models: a HAPEX perspective | |
| P. Mascart, J.-P. Pinty (Clermont-Ferrand, France), O. Taconet and M. Ben Mehrez (Issy-les-Moulineaux, France) | 319 |
| The impact of plant stomatal control on mesoscale atmospheric circulations | |
| R. Avissar (New Brunswick, NJ, USA) and R.A. Pielke (Fort Collins, CO, USA) | 353 |
| Evapotranspiration models with canopy resistance for use in climate models, a review | |
| R.E. Dickinson (Boulder, CO, USA), A. Henderson-Sellers (Sydney, N.S.W., Australia), C. Rosenzweig (New York, NY, USA) and P.J. Sellers (Greenbelt, MD, USA) | 373 |
| <i>Technical Note</i> | |
| Symbols, units, notation. A statement of journal policy | |
| W.E. Reifsnyder (New Haven, CT, USA), K.G. McNaughton (Palmerston North, New Zealand) and J.R. Milford (Reading, UK) | 389 |
| <i>Contents of Vol. 54 (1991)</i> | 399 |

